Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

FACULTY KIT

Objective –

The goal of this faculty kit is to outline the roles, responsibilities, and tools necessary for the successful project implementation of the **Corporate Connect Platform for Startups** by students. This system involves startups, corporates, and admins interacting through various functionalities such as user registration, matchmaking, CSR funding applications, messaging, and payment integration. This kit will guide the development process and ensure that faculty can effectively manage and oversee the design, development, testing, and deployment of the platform, while also tracking the progress and ensuring that all objectives are met efficiently.

Requirements Specification –

The E-Library system will include:

- **User Management:** Secure login and role management for different users (Startup, Corporate, Admin).
- **Matchmaking & Search:** Facilitate matchmaking between startups and corporates based on location, industry, and interests.
- **CSR Funding Application:** Enable startups to apply for CSR funding from corporates, with tracking of application status.
- **Messaging System:** Real-time messaging between startups and corporates for collaboration and feedback.
- **Admin Control**: Admins will manage user roles, profiles, and platform activity.
- **Payment Integration**: Integration with payment providers for subscriptions.

Technology Familiarization –

The project will use **Spring Boot** for backend development, enabling the implementation of REST APIs and database interactions. The frontend will be developed using **React.js**, providing a dynamic, responsive user interface. For the database, **SQL** and **NoSQL** databases will be utilized to store user information, materials, and subscriptions. The integration of payment functionality will use **Stripe** or similar payment gateway.

Database Creation –

The E-Library System will use relational and non-relational databases to handle different data types:

- **SQL Database** for structured data (user data, materials, subscriptions).
- **NoSQL Database** for unstructured data such as user logs or metadata of materials.
- **User**: Stores user details, including user roles (Startup, Corporate, Admin), login credentials, and registration data.
- **CSR Application:** Contains details about CSR funding applications, including application status, requested amount, and corporate responses.

High-Level and Detailed Design –

System Overview:

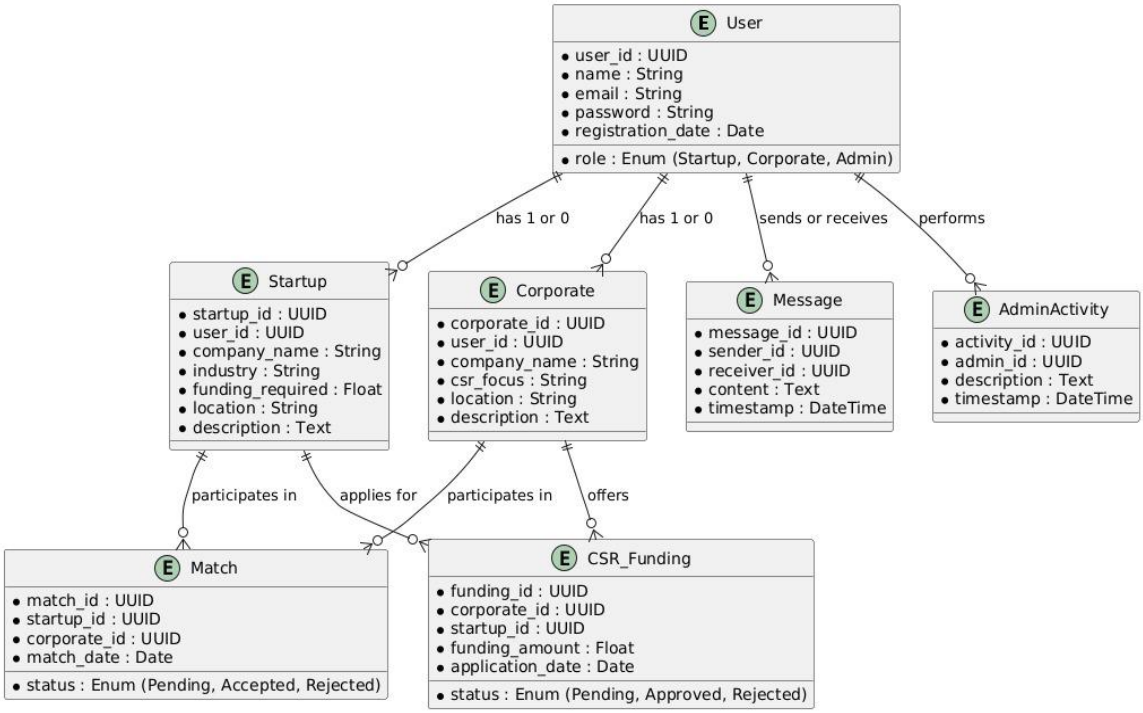
The system consists of three layers:

- **Frontend**: A React.js-based user interface that allows seamless interaction for user registration, matchmaking, messaging, CSR funding applications, and profile management..
- **Backend**: Node.js/Express.js (or Django) manages server-side logic, database operations, and communication with third-party services such as email notifications or payment gateways.
- **Database**: SQL (for user, materials, and transactions) and NoSQL (for unstructured data) ensure scalable, fast, and reliable data storage.

Detailed Design:

The backend will expose RESTful APIs for user authentication, profile management, matchmaking, CSR funding workflows, and messaging. The React.js frontend will consume these APIs update data in real-time, providing an interactive and user-friendly

experience. .



Frontend Implementation –

React.js will be used to build the user interface for the **Corporate Connect Platform for Startups**. The UI will have dedicated sections for user login, registration, matchmaking, messaging, CSR funding, and profile management. Each user type (Startup, Corporate, Admin) will have tailored views and permissions:

- **Startups:** Search for corporates, apply for CSR funding, manage profiles, and communicate with corporates.
- **Corporates:** Discover startups, post CSR opportunities, manage profiles, and interact with startups.
- **Admins:** Oversee user activity, manage platform data, approve/reject profiles, and generate reports**.**

Integrating the Frontend with the Database –

The frontend of the **Corporate Connect Platform for Startups** will be integrated with the database using a backend developed in Node.js/Express.js (or Django). The backend will expose RESTful APIs to handle HTTP requests and perform CRUD operations, such as user registration, login, matchmaking, CSR funding applications, and messaging. These APIs will interact with the database (PostgreSQL or MongoDB) to fetch, update, and store data. The frontend, built using React.js, will consume these APIs via Axios to dynamically render content, ensuring real-time updates and seamless user interaction.

Test Plan Review -

Testing will be conducted at various stages, ensuring all system functionalities are working as expected:

- **Unit Testing**: Backend logic for APIs will be tested for correctness.
- **Integration Testing**: Testing the interaction between frontend and backend.
- **UI/UX Testing**: Ensuring the frontend is user-friendly and functional.
- **Performance Testing**: Ensuring the system can handle high loads during usage.

Final Review -

At the conclusion of the project, a final review will be conducted to ensure the system meets all specified requirements. This will include validating user authentication, material access, subscription functionality, and payment module. Additionally, user feedback will be gathered to make improvements.

Documents/References that May Aid the Process of Evaluation-

- **React.js Documentation**: For frontend development and UI handling.
- **SQL and NoSQL Database Tutorials**: For database design and integration.
- **Payment Gateway Documentation**: For payment gateway integration.

Conclusion –

The **Faculty Kit** serves as a comprehensive guide for faculty members involved in the development and deployment of the Corporate Connect Platform. Through its structured approach, it ensures that all aspects of the project, from initial planning to final review, are thoroughly covered. The kit aids faculty members in understanding the various technologies, systems, and modules implemented in the project, including database creation, front-end implementation, and integration with the back-end system.

The technology familiarization section prepares faculty members to oversee the adoption of React, and SQL/NoSQL databases. High-level and detailed design stages provide a clear roadmap for the technical architecture of the system. The front-end implementation process highlights the creation of an intuitive and responsive user interface, while integrating the front-end with the database ensures seamless data flow and interaction.

Furthermore, the test plan review and final review sections allow faculty to evaluate the system's functionality and ensure all project requirements are met. The Faculty Kit not only supports the development phase but also guides faculty through the quality assurance process, ensuring that the Corporate Connect Platform is scalable, secure, and user-friendly. This kit is essential for ensuring that the project meets its educational objectives and provides a valuable learning experience for students involved in its creation.